Tornadoes

A tornado is defined as a strongly rotating column of air attached to the base of a thunderstorm and extending to the ground.

Simply, tornadoes spin up beneath thunderstorms, and thunderstorms need a good supply of humid air to stay alive. But this moist flow doesn't last forever and can easily be disrupted by other storms, or even the storm itself when rain falls and spreads cool air ahead of the storm. Without the updraft of warm humid air, the tornado's spiraling winds unravel and weaken, and it falls apart.

Movies of tornadoes in the past two decades have been extensively studied and most researchers agree on the tornado life cycle: formation stage, organization stage, mature stage, shrinking stage and decaying stage. The tornado begins to decay as the whirling column of air is stretched into a very thin tube. This is often referred to as the rope stage, when the tornado becomes very thin and begins "roping out." It's thought to occur when the burst of rain-cooled air on the storm's backside wraps around the storm and cuts off the warm, humid air flowing in.

In the early 1980s, researchers roaming the southern Plains to study the thunderstorms that spawn the biggest tornadoes discovered that large, rotating thunderstorms called "supercells" can spawn tornadoes one after another, in cycles. The rotating updraft that feeds the supercell warm, humid air is known as a "mesocyclone;" meso- meaning relatively small meant the mesocyclone was like a miniature storm system, with fronts and central low pressure.

They found that as a supercell evolves, the mesocyclone would form and mature, then begin to weaken. During this weakening, a new mesocylclone would form, in similar fashion to the formation of an area of low pressure on a stationary front. Tornadoes might spin up beneath each intensifying mesocyclone.

From www.USAToday.com

Websites You May Want to Visit

FEMA For Kids
http://www.fema.gov/kids/tornado.htm

Chris Kidler's Sky Diary - Tornadoes
http://skydiary.com/kids/tornadoes.html

Books You May Want to Read - Also check the shelves at 551.55

Twister on Tuesday by Mary Pope Osborne
When Jack and Annie travel back to the Kansas prairie in search of "something to learn," they gain an understanding of how hard life was for pioneers and they experience the terror of a tornado.

Twisters and Other Terrible Storms: A Nonfiction Companion to Twister on Tuesday by Will Osborne and Mary Pope Osborne

Tornadoes

Describes the changing nature of weather and how meteorologists predict and study such storms as tornadoes, hurricanes, and blizzards.

The Tornado Watches: An Ike and Mem Story by Patrick Jennings
A tired Ike stays up all night for four nights to warn his family of any approaching tornadoes.

Tornado by Catherine Chambers
Describes how tornadoes are formed, the conditions that exist in tornadoes, the harmful and beneficial effects of these storms, and their impact on humans, plants, and animals.

To Find More Information about Tornadoes and storms

In TEL, go to Student Edition or Junior Edition - K12 and use the following search strategies:

Tornadoes	Meterology	Storms
Tornadoes - History	Tornadoes - Statistics	

Your Turn to Make a Tornado

Supplies:

- Water
- Two 2L bottles
- Cardboard
- Scissors
- Tape

How To Make It:

1. Fill one bottle 3/4 full with water.
2. Cut a circle of cardboard as big around as the bottle's opening.
3. Cut a 1/4-inch hole in the center.
4. Place the cardboard circle on top of your water bottle's opening.
5. Turn the other empty bottle onto the bottle. Making sure both openings are together.
6. Wrap tape around the bottle necks to make sure they stay together and do not leak.
7. Hold the bottles so that the bottle with water is upside down on top.
8. Hold the bottom bottle to steady it. With the other hand, begin moving the top bottle in a circle.
9. Watch what happens!

From Kids Craft Corner
http://www.youthonline.ca/crafts/tornado.shtml